

IN THE U.S. PATENT AND TRADEMARK OFFICE

Express Mail Label No.: EM 039 335 019 US

Attorney Docket No.: Furuya Case 1340A



Box FWC

The Commissioner of Patents and Trademarks

Washington, D. C. 20231

Sir:

This is a request for filing a file wrapper ☒ continuation
☐ divisional ☐ continuation-in-part application under 37 CFR
 1.62 of pending prior application:

Serial No.: 08/583 062 Filing Date: January 3, 1996

Title: SEPARATING AGENT

Original Title (if different): N/A

Applicant(s): Tatsushi MURAKAMI

Original Applicants (if different): N/A

Group: 1306

Examiner: Therkorn

The above-identified prior application, in which no payment of
 the issue fee or abandonment or termination of proceedings has occurred,
 is hereby expressly abandoned as of the filing date of this new
 application. Please use all of the contents of the prior application
 file wrapper, including the drawings, as the basic papers for the new
 application.

The filing fee ☐ will be submitted later under 37 CFR 1.62(d).

☒ is calculated as follows, after entering any
 amendments which this transmittal indicates are
 to be entered prior to such calculation:

For	No. Filed	No. Extra	(X) LG Entity	RATE () SM Entity	Fee
Basic Fee				\$770.00	\$385.00 \$770.00
Total Claims	(9 - 20 = 0)		x	\$ 22.00	x \$ 11.00 0.00
Indep. Claims	(1 - 3 = 0)		x	\$ 80.00	x \$ 40.00 0.00
<input type="checkbox"/> Multiple Dependent Claim			+	\$260.00	+ \$130.00 0.00
* * * TOTAL FILING FEE * * *					\$770.00

☒ A check for \$ 770.00 is enclosed to cover fees.

- ☐ Please charge my Deposit Account No. 06-1382 in the amount of \$_____. A duplicate of this transmittal is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or to credit any overpayment to Deposit Account No. 06-1382. A duplicate copy of this sheet is enclosed.
- ☒ Any additional filing fees required under 37 CFR 1.16
- ☐ Any patent application processing fees under 37 CFR 1.17
- ☐ A Verified Statement under 37 CFR 1.9 and 1.27 regarding small entity status is:
- ☐ of record in the prior application.
- ☐ enclosed. (Not required if in prior application.)

Enclosed are:

- ☐ Oath or Declaration (for a continuation-in-part application).
- ☐ Preliminary Amendment. Please enter before calculating the filing fee.
- ☐ Amendment Before First Office Action.
- ☒ Letter Accompanying Rule 62 File Wrapper Continuation.
- ☒ Acknowledgment Postal Card.
- ☐ The continuation-in-part oath or declaration will be submitted later (37 CFR 1.62d). Please notify the undersigned of the due date for submitting it.
- ☐ Cancel in this application Claims ____ of the prior application before calculating the filing fee. (Retain at least one independent claim.)
- ☒ Amend the specification by inserting before the first line the sentence: This application is a ☒ continuation ☐ division ☐ continuation-in-part of U.S. Serial No. 08/583 062, filed January 3, 1996.
- ☒ An amendment under 37 CFR 1.116 was submitted August 21, 1997 but apparently was not received by the Patent Office in the prior application. The claim amendment and remarks are contained in the Letter Accompanying Rule 62 File Wrapper Continuation enclosed herewith.
- ☒ Priority is claimed under 35 USC 119 based on Japanese Application No. 6-155596, filed July 7, 1994.
- ☒ The certified copy was filed in the prior application.
- ☐ The certified copy is enclosed.

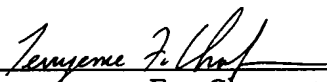
It is understood that secrecy under 35 USC 122 is hereby waived to the extent that if information or access is available to any one of the applications in the file wrapper of a 37 CFR 1.62 application, be it either this application or another application in the same file wrapper, the Patent and Trademark Office may provide similar information or access to all the other applications in the same file wrapper.

Please address all telephone calls to the undersigned at (616) 381-1156. Please address all correspondence to:

FLYNN, THIEL, BOUTELL & TANIS, P.C.
2026 Rambling Road
Kalamazoo, Michigan 49008-1699

The undersigned is ☒ an attorney of record in the prior application.
☐ acting under 37 CFR 1.34.

Respectfully submitted,


Terryence F. Chapman

FLYNN, THIEL, BOUTELL	Dale H. Thiel	Reg.No. 24 323
& TANIS, P.C.	David G. Boutell	Reg.No. 25 072
2026 Rambling Road	Ronald J. Tanis	Reg.No. 22 724
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	Timothy B. Clise	Reg.No. 40 957

IN DUPLICATE

TFC/smd

Encl: Listed Above

104.9609

"Express Mail" Mailing Label No.: EM 039 335 019 US

Date of Mailing: September 23, 1997

Applicant(s) : Tatsushi MURAKAMI

Title : SEPARATING AGENT

Serial No. : Unknown

Filed : Unknown

Atty Docket No.: Furuya Case 1340A



The Commissioner of Patents and Trademarks
Washington, D. C. 20231

EXPRESS MAILING CERTIFICATE

Sir:

I hereby certify that the attached paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

FLYNN, THIEL, BOUTELL & TANIS, P.C.

By: 

Date: September 23, 1997

Document(s) attached: Rule 62 Continuation Patent
Application Transmittal (in duplicate)
including enclosures listed thereon

Telephone: (616) 381-1156

191.9011

09/23/97



PATENT APPLICATION

IN THE U.S. PATENT AND TRADEMARK OFFICE

Express Mail Label No.: EM 039 335 019 US

Attorney Docket No.: Furuya Case 1340A

A/FWC

#13/C
1-18-98 JA

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Rule 62 Transmittal - Page 2

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- ☒ Amend the specification by inserting before the first line the sentence: This application is a ☒ continuation ☐ division
- ☐ continuation-in-part of U.S. Serial No. 08/583 062, filed January 3, 1996. ^{now abandoned}

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For : SEPARATING AGENT

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Group : Unknown

Filed : Unknown

Examiner: Unknown

Atty. Docket

No.: Furuya Case 1340A

The Commissioner of Patents and Trademarks

Washington, D. C. 20231

LETTER ACCOMPANYING RULE 62 FILE WRAPPER CONTINUATION

Sir:

On August 21, 1997, an Amendment After Final Rejection was sent to the Patent Office in the parent case. During a telephone conversation between the undersigned and the Examiner on September 23, 1997, it was discovered that the Patent Office never received the above Amendment After Final Rejection. Therefore, a file wrapper continuation is being filed today and the claim amendment and remarks that were in the Amendment After Final Rejection are as follows.

IN THE CLAIMS

Please amend Claim 7 as follows:

Claim 7, line 2; change "1 to 3" to ---1 to 2.21---.

REMARKS

Claim 7 has been amended in order to more particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically speaking, the upper limit of the molecular weight distribution has been limited to 2.21. Support of this amendment can be found in Example 4 of the present specification. No new matter has been added.

The specification has been objected to and Claim 10 rejected under 35 USC 112, first paragraph, for not having support for the

range 1.22 to 2.21. Support for this range can be found in Example 1 of the present specification wherein the molecular weight distribution is 1.22 and Example 4 of the present invention where the molecular weight distribution is 2.21. No new matter has been added. Since this amendment places the present application in better form for consideration on appeal, entry thereof is deemed proper under 37 CFR 1.116(a). Favorable consideration is respectfully solicited.

Claims 2-5, 7 and 8 have been rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103 as being obvious in view of either Okamoto or Yuki. Claim 5 has been rejected under 35 USC 103 as being unpatentable over Yuki in view of Okamoto. Claims 9-11 have been rejected under 35 USC 103 as being unpatentable over either Okamoto '394 or Yuki and further in view of Okamoto '872. Claim 11 has been rejected under 35 USC 103 as being unpatentable over either Okamoto '394 or Yuki in view of Okamoto '872. Applicants respectfully request reconsideration in light of the amendments to the claims and the following comments.

As discussed in the previous response, the instant invention is directed to a separating agent used in the separation of chiral materials by liquid chromatography. The separating agents of the present invention have a narrow molecular weight distribution and therefore avoid some problems associated with conventional polysaccharide derivatives having a wide molecular weight distribution. That is, the elution of polysaccharide derivatives of a low molecular weight from a column during use, steadiness of the baseline during operation of the column and a very limited number of solvents which can be used as the eluent. The presently claimed invention overcomes these problems and is not disclosed by the prior art cited by the Examiner.

Okamoto et al '394 discloses the use of cellulose derivatives having an aromatic ring as a separating agent for optical isomers, geometrical isomers and polymers having different molecular weight ranges by liquid chromatography. The only discus-

sion this reference has with respect to molecular weight distribution is in Comparative Example 1 in column 12 where cellulose triacetate having a molecular weight distribution of 2.45 is shown. The presently claimed invention is distinguishable over this reference in that the upper limit of the molecular weight distribution is 2.21. Moreover, as will be shown below, this difference is not merely an obvious distinction and the patentability of the presently claimed invention over this reference will be clearly established.

The Yuki et al reference discloses a separating agent for optical isomers comprising a cellulose triacetate consisting essentially of the type II form. However, like the previously discussed reference, the only disclosure this reference has with respect to molecular weight distribution is in synthesis Example 1 in column 7 wherein cellulose triacetate having a molecular weight distribution of 2.45 is shown. Since the upper limit of the molecular weight distribution of the present claims is 2.21, the presently claimed invention clearly is patentably distinguishable over this reference.

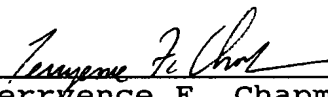
Okamoto et al '872 is directed to an alkyl-phenylcarbamate derivative of a polysaccharide which is used in the optical separation of a racemic mixture. However, there is no disclosure at all in this reference with respect to molecular weight distribution. As such, this reference only shows an alkyl-phenylcarbamate derivative of a polysaccharide and has no discussion at all with respect to the criticality of the claimed molecular weight distribution range.

In order to clearly illustrate the superiority of the presently claimed invention, Applicants are enclosing a table which compares the separating agents of the prior art cited by the Examiner with the separating agents of the present invention having a molecular weight distribution of from 1.22 to 2.21. In the enclosed table, the separating agent of Comparative Example 1 falls within the scope of Okamoto et al '872. The separating agent designated as Okamoto et al is the cellulose triacetate

separating agent of Okamoto et al '394. The separating agent designated as Yuki et al is the separating agent corresponding to Yuki et al '968.

As illustrated in the enclosed table, the separating agents of Examples 1-4, which correspond to the present invention, clearly have a higher separation factor, resolution and baseline stabilization time as compared with the comparative separating agents. Although the amylose derivative of Comparative Example 1 had a higher separation factor and resolution, it also had a much higher baseline stabilization time of 26 hours. As shown by the data contained in the enclosed table, the presently claimed invention clearly is unobvious in light of the prior art cited by the Examiner. The Examiner is respectfully requested to reconsider the present application and to pass it to issue.

Respectfully submitted,


Terryence F. Chapman

TFC/smd

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Encl: None

136.8905